Introduction to Clean Air Act Permits (Oregon)

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Why are Air Permits Important?

- **ACDP – Air Contaminant Discharge Permit**
- Protect the National Ambient Air Quality Standards
- Help sources demonstrate compliance with applicable state and federal regulations
  - Interpret regs and put them in easy-to-follow conditions
- Allow the public the opportunity to comment on activities that affect their environment
- Certain sources are required to obtain a permit by Oregon Rules

Air Permit – Do I need one?

Air Quality Permitting and Technical Assistance

Permitting Assistance

- Short-Term NAAQS Requirements
- Start with Your Regional Contact
- Help Finding the Right Permit
- Small Business Assistance
- Frequently Asked Questions

Permit Applications and Fees

- Simple and Standard ACDP
- Basic and General ACDP
- Title V
- Cleaner Air Oregon Permitting Requirements

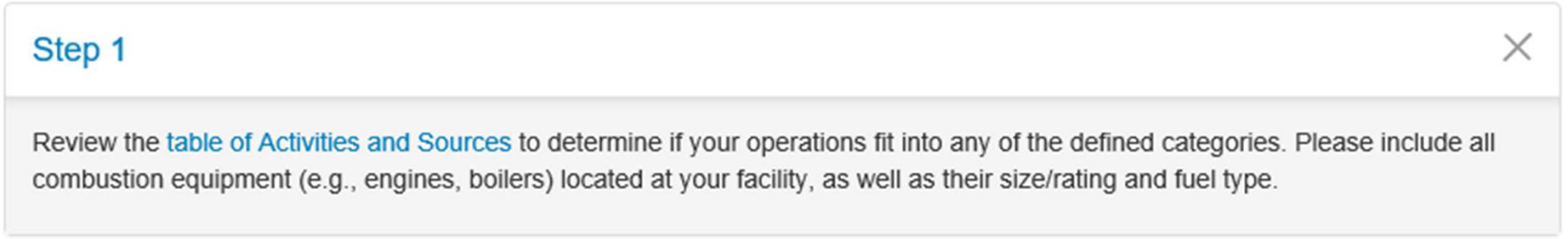
Air Permit – Do I need one?

DEQ designed a step-by-step process to assist a facility in determining if there is a need for an air permit and to identify the correct permit type. DEQ has four types of Air Contaminant Discharge Permits, listed here in order from lowest fees/complexity to highest fees/complexity: Basic ACDP, General ACDP, Simple ACDP, and Standard ACDP.

- Step 1
- Step 2
- Step 3
- Step 4
- Step 5

https://www.oregon.gov/deq/aq/aqPermits/Pages/Help-Finding-Permit.aspx

Air Permit – Do I need one?



- OAR 340-216-8010, Table 1
- List of Activities and Sources that require a Permit
  - Part A: Basic ACDP
  - Part B: General, Simple, or Standard ACDP
  - Part C: Standard ACDP
- Applicability based on Activity
- Part B, 84 and 85 based on air quality concerns or uncontrolled emissions

10 year Permits

Basic ACDP

- Simplified annual reporting
- No plant emission limits
- Low fees

General ACDP

- Facility operations must be addressed by general permit conditions
- Plant Site Emission Limits

ACDP = Air Contaminant Discharge Permit

5 year Permits

Simple ACDP

- Minimal source complexity
- Plant Site Emission Limits
- *10 Year Term in Upcoming Rule Changes*

Standard ACDP

- Complex rule requirements
- Complex compliance determination methods
- Source wants to maintain netting basis
- Plant Site Emission Limits

ACDP = Air Contaminant Discharge Permit

Title V Permit

- Major source of emissions
  - Single criteria pollutant emissions >100 tons/year
  - Single HAP emissions > 10 tons/year
  - Combined HAP emissions > 25 tons/year
- Source specific (Air Curtain Incinerators)
- Can be VERY Complicated

HAP = Hazardous Air Pollutant

Air Permit - Applying

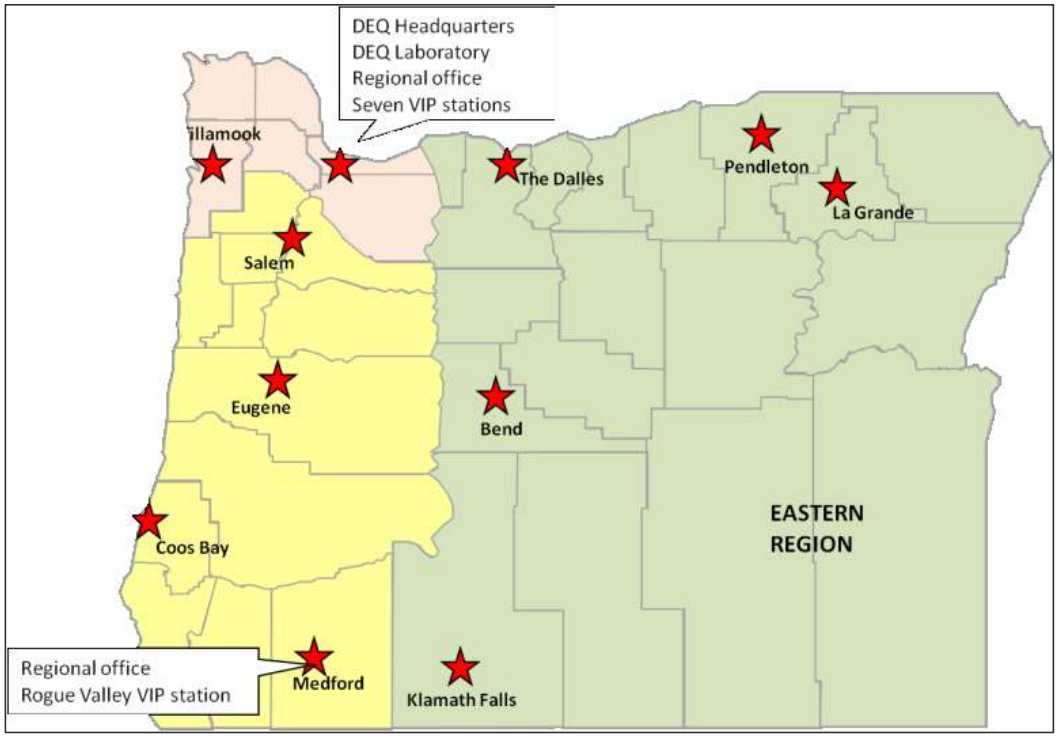
- We have an Application Guidance Document!
  - Guidance for all permit types
- Forms are available on DEQ's website

Air Permit - Applying

- Pre-application Meeting
  - DEQ recommends to meet prior to submitting an application
  - Discuss Project and Timelines
  - Provide Clarity in the Application Process

Who do I contact?

- Northwest Region (Portland)
  - Main Line: 503-229-5696
- Eastern Region (Bend)
  - Main Line: 541-388-6146
- Western Region (Salem)
  - Main Line: 503-378-8240
- LRAPA – Lane County
  - Main Line: 541-736-1056
  - https://www.lrapa.org/



Land Use Compatibility Statement (LUCS)

- Ensures DEQ permit or approval is consistent with local government comprehensive plans and land use regulations.
- Required for new sources and some modifications
- Contact the Planning Department in the City or County where the project is located
- Detailed LUCS information on DEQ's website

Cleaner Air Oregon (CAO)

- Focus: Toxic Air Contaminants
- Who does it apply to?
  - New Simple and Standard ACDPs
  - Called-in Facilities
- CAO Website
- “Source Risk Limits” Section in ACDP

National Ambient Air Quality Standards

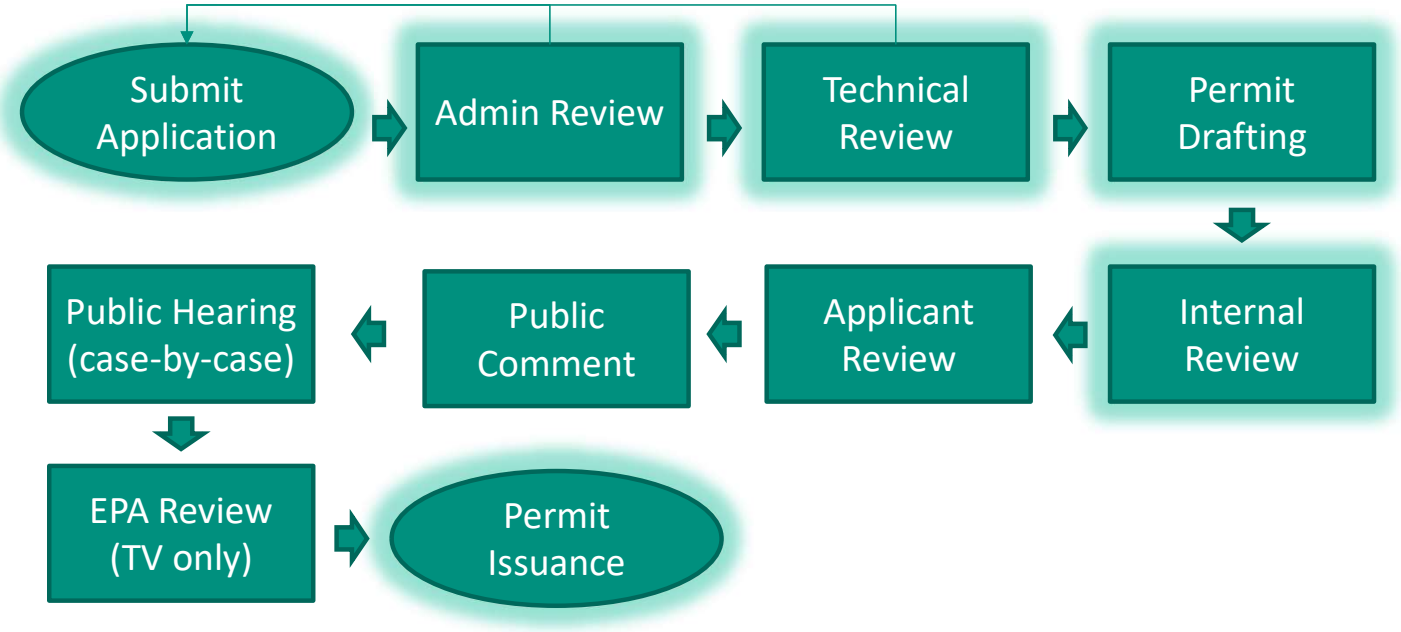
- Annual SERs Not Protective of Short-Term NAAQS
- Modeling Required
  - New Simple and Standard ACDPs
  - Existing Facilities
    - With CAO: Can do concurrently with CAO
    - Prioritization Process
  - DEQ Air Quality Technical Services
- NAAQS Website ← LOTS of Information Here!

SER = Significant Emission Rate

Fees

- OAR 340-216-8020 Table 2
- Initial permitting fees
  - Basic ACDP - $180
  - Standard ACDP - $18,000
- Annual fees
  - Basic ACDP (#1-7) - $648
  - Standard ACDP - $15,759
- Specific activity fees (permit modification)

Permitting Process



Applicant Pre Public Notice Review

- DEQ Provides Source with Draft Permit Documents
- Simpler to address source comments prior to public notice
- Key Things to Look for:
  - Are Emissions Units correctly identified?
  - Verify NSPS/NESHAP applicability determinations
  - Do you understand why each requirement is in permit?
  - Do conditions need clarification?
  - Read each condition!

Public Participation

- OAR 340 Division 209
- Up to 40 day period for DEQ to receive comments
- Public Hearing(s)
- Title V Permits – EPA 45-day Review
- DEQ responds to comments received
- Permit changes may require 2nd public comment period
- If a facility meets all legal requirements, DEQ will issue the facility's air quality permit.

What goes into Air Permit?

- A permit is the “Tool for Compliance” - contains conditions demonstrating compliance with applicable regulations
  - Emission Limits (PSEL, facility-wide)
  - Performance Limits (Unit specific)
  - Source Testing
  - Monitoring
  - Recordkeeping
  - Reporting

PSEL = Enforceable limit on facility’s potential-to-emit

ACDP Table Of Contents

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DEQ

Emission Limits

Plant Site Emission Limits (PSEL)

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM	24	tons per year
PM_{10}	14	tons per year
$PM_{2.5}$	9	tons per year
SO_2	39	tons per year
NO_X	39	tons per year
CO	99	tons per year
VOC	39	tons per year
GHGs (CO_2e)	74,000	tons per year

Performance Limits

2.3. Particulate Matter Emissions

The permittee must comply with the following particulate matter emission limits.

a. Particulate matter emissions from emergency generator engines and fire pump engines, and any device or process (other than fugitive emissions sources, fuel burning equipment, refuse burning equipment, or solid fuel burning devices certified under OAR 340-262-0500) that is installed, constructed or modified after April 16, 2015 must not exceed 0.10 grains per dry standard cubic foot. [OAR 340-226-0210(2)(c)]

b. Particulate matter emissions from any fuel burning equipment (except solid fuel burning devices that have been certified under OAR 340-262-0500) that is installed, constructed or modified on or after April 16, 2015 must not exceed 0.10 grains per dry standard cubic foot, corrected to 12% CO_2 or 50% excess air. [OAR 340-228-0210(2)(c) and OAR 340-228-0210(3)]

Source Testing (1)

6.1. Source Testing Requirements

The permittee must perform the following source tests within 180 days of the fryer FL6 initial start-up unless an extension is approved by DEQ in writing: [OAR 340-212-0120]

a. The permittee must conduct a source test of the fryer FL6 to demonstrate compliance with Condition 2.3 and verify emission factors used to determine compliance with the PSEL of Condition 4.1. During the source test, the following parameters must be monitored and recorded:

i. Emissions of PM in gr/dscf, pounds/hour and pounds/ton of finished product;
ii. Emissions of VOC in ppmvd (propane), pounds/hour and pounds/ton of finished product;
iii. Opacity readings on the exhaust stack following the procedures of EPA Method 9, for a period of at least six (6) minutes during or within thirty (30) minutes before or after each test run;
iv. The production rate, in tons of finished product/hr, and product type;
v. The natural gas combustion rate, in ft^3/hr; and
vi. Wet scrubber operating parameters, including water pressure (psi) and flow rate (gpm).

Source Testing (2)

b. All tests must be conducted in accordance with DEQ's Source Sampling Manual and the approved source test plan. The source test plan must be submitted at least 30 days in advance and approved by the Regional Source Test Coordinator. The source test report must be submitted to the Regional Source Test Coordinator within 60 days of the test unless otherwise approved in the source test plan.

Tested Pollutant	Reference Test Method*
PM	ODEQ Method 7
VOC	EPA Method 25A
Exhaust gas flow rates	EPA Methods 1-4
Opacity	EPA Method 9

*Substitution of alternative test methods must be pre-approved by the DEQ.

c. Only regular operating staff may adjust the combustion system or production processes and emission control parameters during the source test and within two hours prior to the source test. Any operating adjustments made during the source test, which are a result of consultation with source testing personnel, equipment vendors or consultants, may render the source test invalid.

d. Unless otherwise specified by permit condition or DEQ approved source test plan, all compliance source tests must be performed as follows:
   i. At least 90% of the design capacity for new or modified equipment;
   ii. At least 90% of the maximum operating rate for existing equipment; or
   iii. At 90% of the normal maximum operating rate for existing equipment. For purposes of this permit, the normal maximum operating rate is defined as the 90th percentile of the average hourly operating rates during a 12 month period immediately preceding the source test. Data supporting the normal maximum operating rate must be included with the source test report.

Monitoring

5.1. Monitoring Requirements

The permittee must monitor the operation and maintenance of the facility and associated air contaminant control devices as follows: [OAR 340-226-0120]

a. Amount of natural gas combusted in boilers and fryers (ft^3); and
b. Weight of finished product processed in the fryers (tons).

Recordkeeping

8.1. Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the facility and associated air contaminant control devices: [OAR 340-214-0114]

a. Amount of natural gas combusted in boilers and fryers (MMft^3/month);
b. Weight of finished product processed in the fryers (tons/month);
c. Records of operation and maintenance requirements for wet scrubbers described in Condition 3.1; and
d. Records of maintenance requirements for boilers described in Condition 3.2.

Reporting

9.2. Annual Report

For each year this permit is in effect, the permittee must submit to DEQ by **February 15** two (2) paper copies and one (1) electronic copy of the following information for the previous calendar year. If February 15 falls on a weekend or Monday holiday, the permittee must submit their annual report on the next business day.

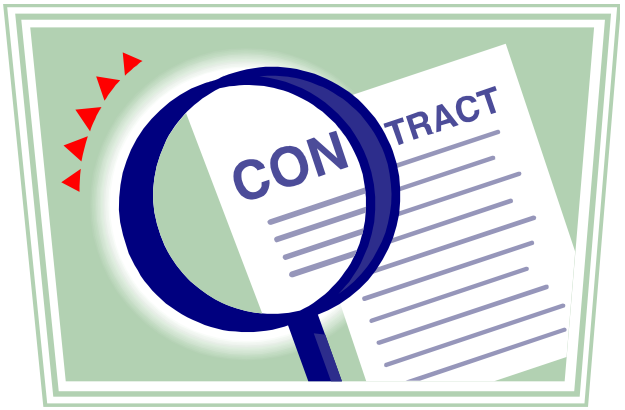
a. Operating parameters:
   i. Amount of natural gas combusted in boilers and fryers, in MMft^3, monthly and 12-month rolling;
   ii. Weight of finished product processed in the fryers, in tons, monthly and 12-month rolling.
b. Calculations of pollutant emissions for 12-consecutive calendar month period determined each month in accordance with Conditions 5.2, 5.4 and 5.5.
c. A brief summary listing the date, time, and the affected device/process for each excess emission that occurred during the reporting period.
d. Summary of complaints relating to air quality received by permittee during the year in accordance with Condition 8.2.
e. List permanent changes made in facility process, production levels, and pollution control equipment which affected air contaminant emissions.
f. List major maintenance performed on pollution control equipment.

So You Have an ACDP!

- Stay below your Emission Limits
- Read your permit and ask questions early
- Read your Review Report
- Keep a copy on-site
- Review for actions that must be taken
- Expect an inspection!

IMPORTANT!!!!

- Read your permit!
- Read your permit!
- Read your permit!



Why Is This Important?

- A permit is the “Tool for Compliance”
  - Compliance with each permit condition demonstrates compliance with applicable regulation(s)
  - Details what testing and recordkeeping is required
  - At inspection time, the source will be tested on its contents!
  - Ignorance is not an excuse

Inspections

- DEQ Inspects Permitted Facilities
  - Periodically (e.g., every 3 years)
  - Complaint Inspections
- Can be Announced or Unannounced
- The ACDP is the Rubric
- DEQ Will Enforce on Violations
  - Warning Letter or Pre Enforcement Notice

Making Changes

- Two Main Pathways
  - Notice of Intent to Construct
  - Permit Modification
- Which Pathway?
  - What is PTE of Proposed Project?
  - Does Current ACDP have Relevant Language?
  - Does ACDP Specify NC or Mod?

Introduction to Clean Air Act Permits

Effective Permit Applications

December 6, 2022

Jesse Gonzalez

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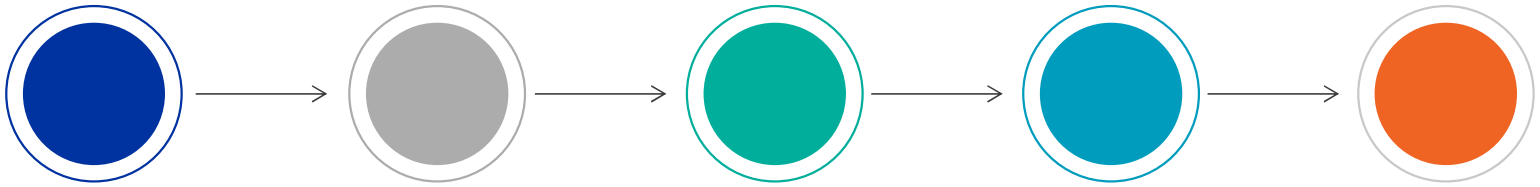
Ideal Project Progression

Application Development

- EnvE Staff
- Consultants
- Manufacturer/Design

Agency/Public Review

- Project Manager/EnvE
- DEQ/LRAPA
- Public Interest Groups



Project Design

- Manufacturers
- Design Team
- EnvE Staff

Application Submittal

- Management
- Consultants/Lawyers
- EnvE Staff

Permit Issuance

- DEQ/LRAPA

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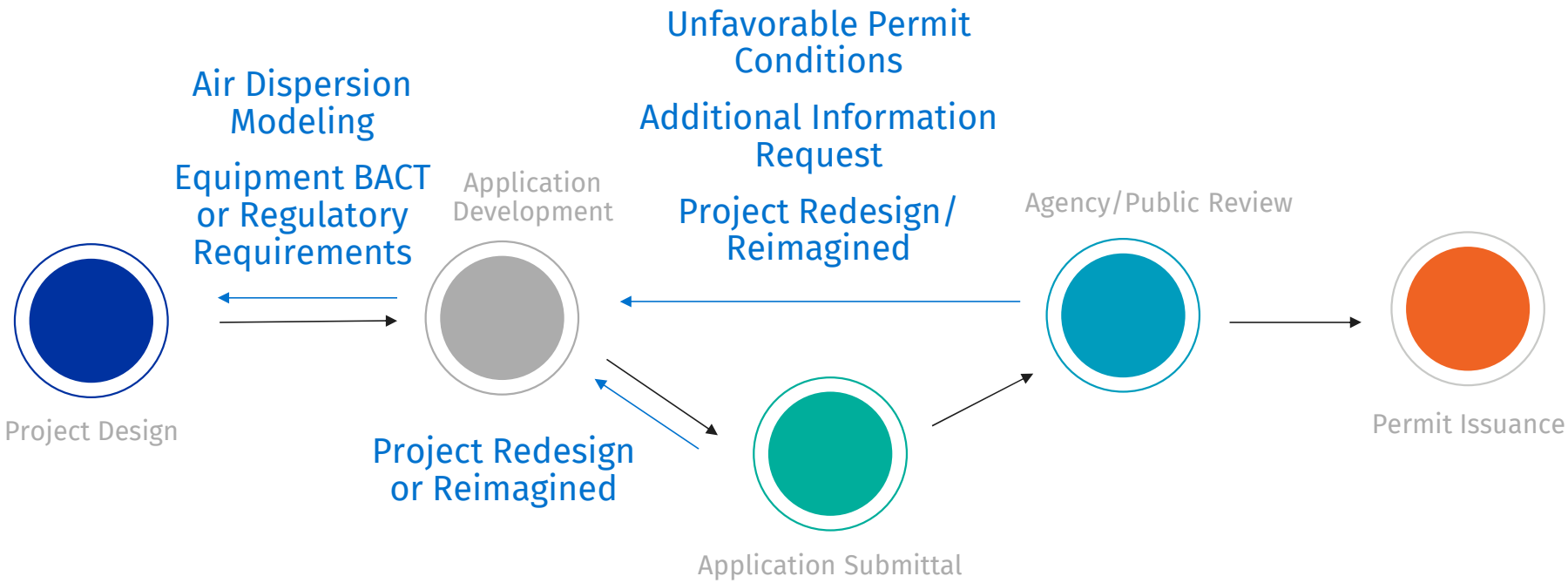
Realistic Project Progression



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Permitting for New Facilities

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Permit Applications – Where to start?

- Obtaining project description/parameters, process flow diagram and facility plot plan

- Identifying ***all*** potential emission sources:
  - Combustion sources (boilers, emergency generators)
  - Material handling (drop points, storage piles)
  - Evaporative emissions (tanks, mixing vessels)
  - Control Devices (baghouses, VOC control devices)

- What about mobile sources?

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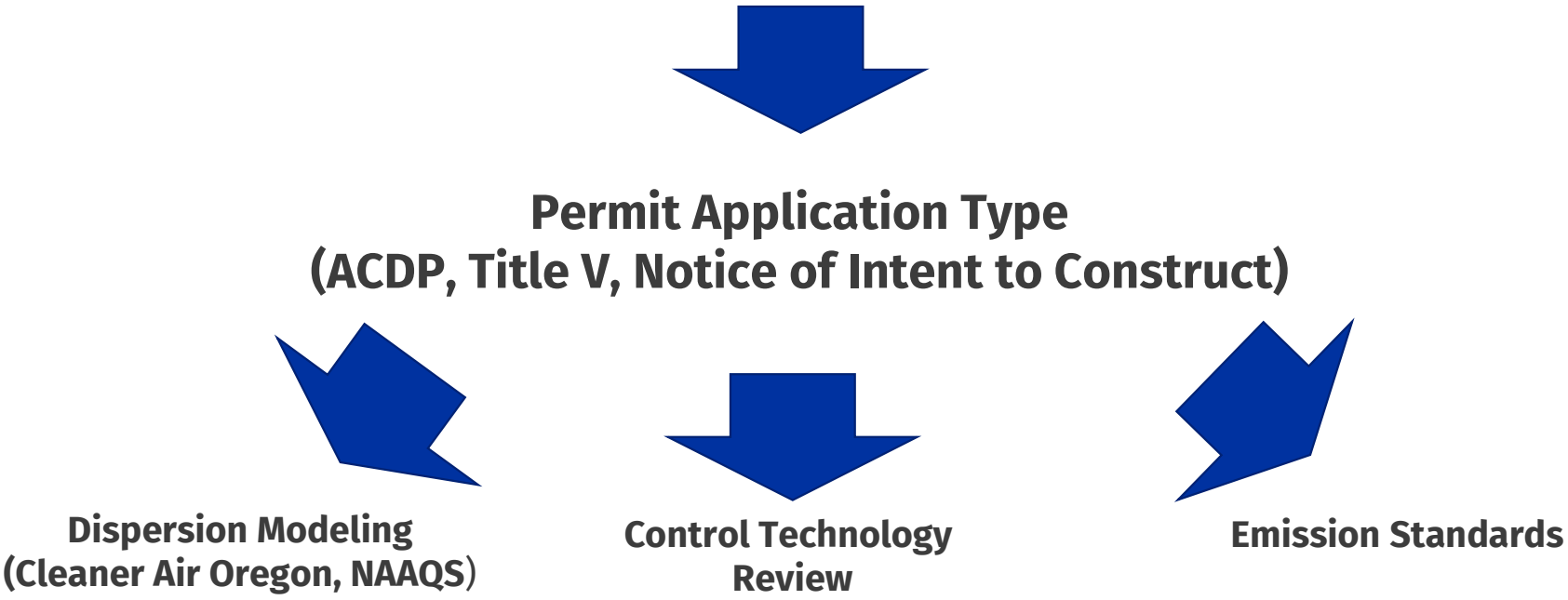
Gating Items for Permit Applications

Emissions Calculations + Source Type + NAAQS Designation



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Emission Calculations

- Selection of Emission Factors:
  - Oregon DEQ Approved Factors
  - Industry Standards
  - AP-42
  - Supplier Guarantees
  - Source Testing

Pollutant	Significant Emission Threshold (tpy)
CO	100
VOC/NO_X/SO_2	40
PM	25
PM_{10}	15
$PM_{2.5}$	10
Total HAPs*	25
Single HAP*	10
GHGs	75,000

* Represents Title V threshold for pollutant

- Throughput/Usage Values:
  - Typically based on maximum potential or rated capacity
  - Do the selected values provide the facility operational flexibility?

- Total emissions for ***each pollutant*** are compared to regulatory emission thresholds

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Source Type

- Oregon DEQ has list of facilities that require specific ACDPs:
  - Hard Chrome Platers = General ACDP
  - Synthetic resin manufacturing = Simple ACDP
  - Total emissions are compared to emission thresholds to ensure a more stringent permit is not needed (i.e., Standard ACDP, Title V)
- Federal regulations require specific facilities to obtain a Title V permit, regardless if over Title V thresholds
- Federal regulations also require lower major source emission thresholds for specific source types

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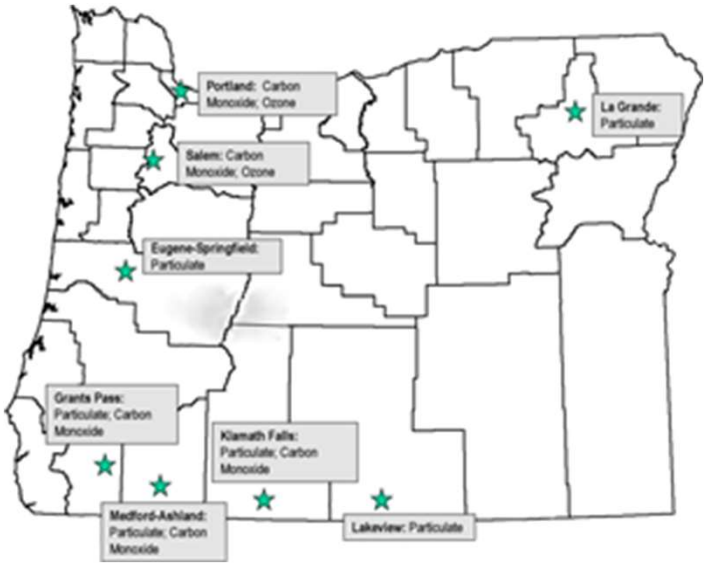
Non-Attainment and Maintenance Areas In Oregon

- Carbon monoxide:
  - Portland Area
  - Eugene/Springfield Area
  - Grants Pass Area
  - Klamath Falls Area
  - Medford Area
  - Salem Area
- PM_{10}:
  - Grants Pass Area
  - Klamath Falls Area
  - Medford Area
  - La Grande Area
  - Oakridge
- $PM_{2.5}$:
  - Klamath Falls Area
- Ozone:
  - Portland Area
  - Medford Area
  - Salem Area



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Key Permit Application Components

- Emissions drive which permit application components will be required

- **Most facilities will be required to:**
  - **Complete short term NAAQS modeling for NO_X, SO_2 and $PM_{2.5}$:**
    - **If emission values exceed SER for given pollutant, additional modeling will be required**
  - **Complete a risk assessment pursuant to Cleaner Air Oregon (CAO)**

- Processes may be required to comply with control technology/emission standard requirements:
  - Typically Achievable Control Technology (TACT)
  - Reasonably Available Control Technology (RACT)
  - Best Available Control Technology (BACT)

- In depth regulatory applicability review (i.e., which rules apply)

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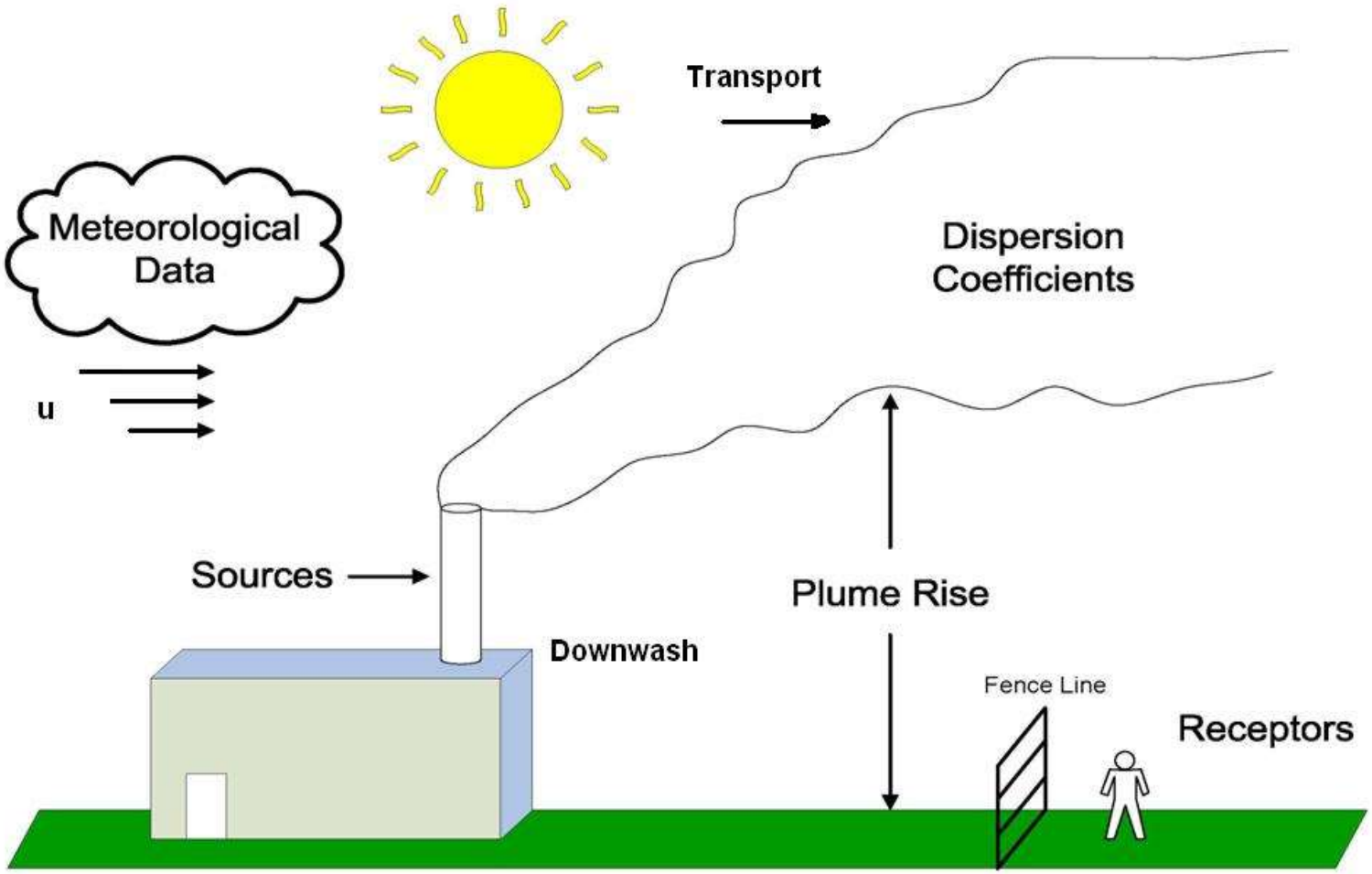

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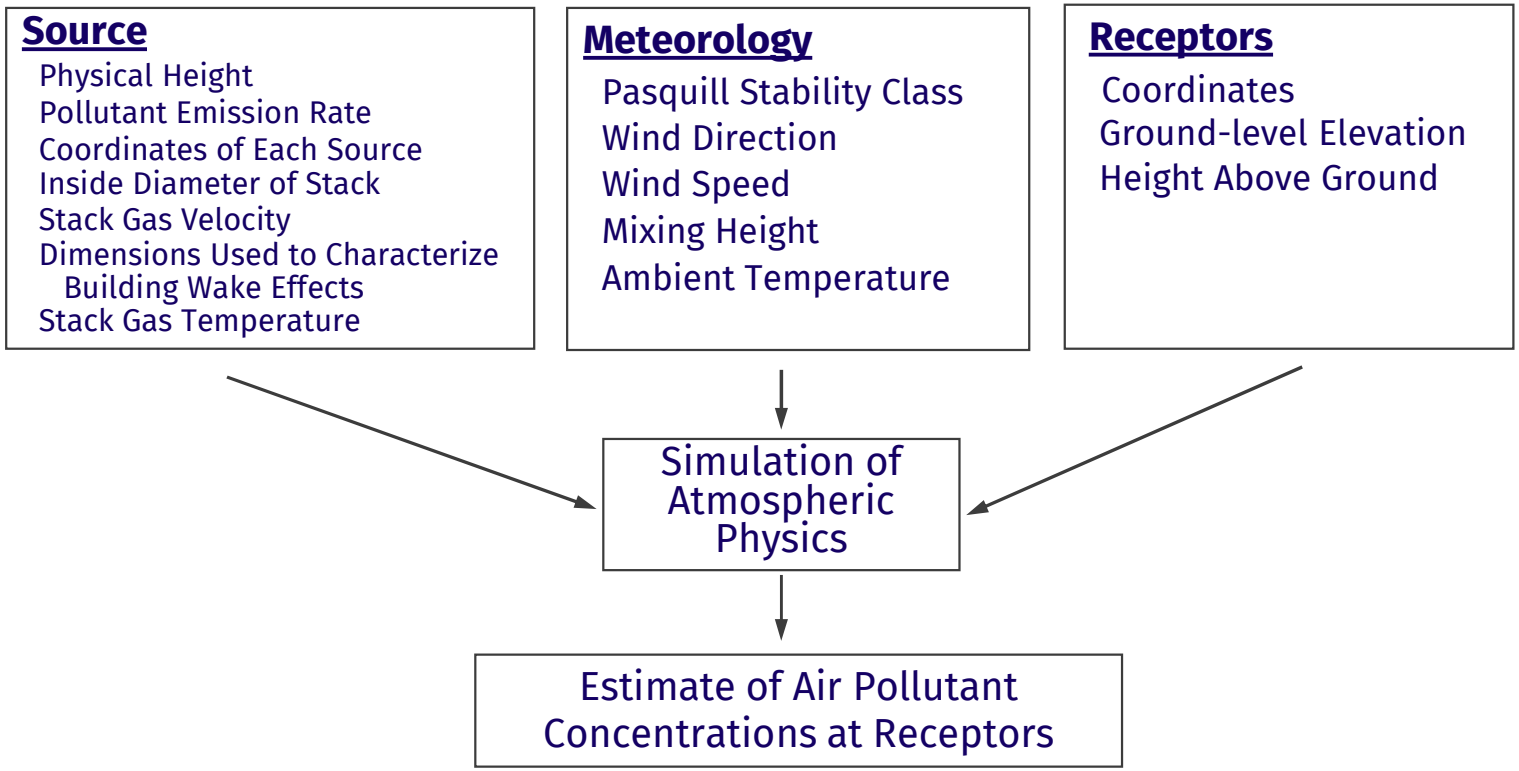
Dispersion Modeling Basics



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Effectiveness of a Pre-Application Meeting

- Meeting with Oregon DEQ or LRAPA to discuss project, goals, etc.

- Some goals include:
  - Alignment on submittal requirements, including fees
  - Discuss any recent changes to policy/rules to consider
  - Answer immediate technical questions from agency, potential permit conditions
  - Estimated permitting timeline

- Ultimately helps Oregon DEQ anticipate what will be submitted and minimize questions throughout the permit application review process

- Also helps facility/company management to hear directly from the agency

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Groups to Coordinate With

- Permitting coordinator or permit writer(s)

- Cleaner Air Oregon (CAO) Group:
  - Discuss emission inventory requirements/questions
  - If preliminary modeling/risk assessment information is known, can discuss risk assessment approach

- NAAQS Modeling Group:
  - Confirm specific requirements for NAAQS modeling
  - Availability of preprocessed meteorological data
  - Inclusion of nearby emissions sources

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What pre-construction activities are allowed?

- Different activities are allowed for minor vs. major NSR permitting actions
- Recommend checking with Oregon DEQ/LRAPA what has historically been allowed
- **Note that facilities who elect to do these activities are doing so at their own risk**

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Permitting for Existing Facilities

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Differences for Existing Facilities

- Unless triggering Major or State New Source Review (NSR), application will require details specifically to the proposed changes

- Notice of Intent to Construct (NC) Process:
  - Streamlined process for smaller projects that do not require permit modification
  - Typically requires emission calculations, regulatory review and application forms
  - Usually 10 – 60 day approval from agency after submittal (Type 1 and 2 Changes)

- NCs requiring permit modification are more involved (i.e., dispersion modeling) and have longer approval process:
  - Changes to emission limits, monitoring requirements, etc.

- **Note recent changes to permitting requirements were adopted and will take effect March 1, 2023.**

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Cleaner Air Oregon for Existing Facilities

- Oregon DEQ and LRAPA have prioritized facilities into three different groups:
  - Group 1 – facilities already called into program
  - Group 2 – next on list to be called in (LRAPA has called in one Group 2 source)
  - Group 3 – facilities that will be called into program likely after Group 2 facilities

- If permitting action triggers State NSR then updated toxic emissions inventory must be included with permit application

- Evaluate impact of upcoming or potential projects on toxic emissions:
  - Additional pollutants introduced to facility
  - High-risk pollutants to consider

- Triennial reporting requirements, next report will be due in 2024

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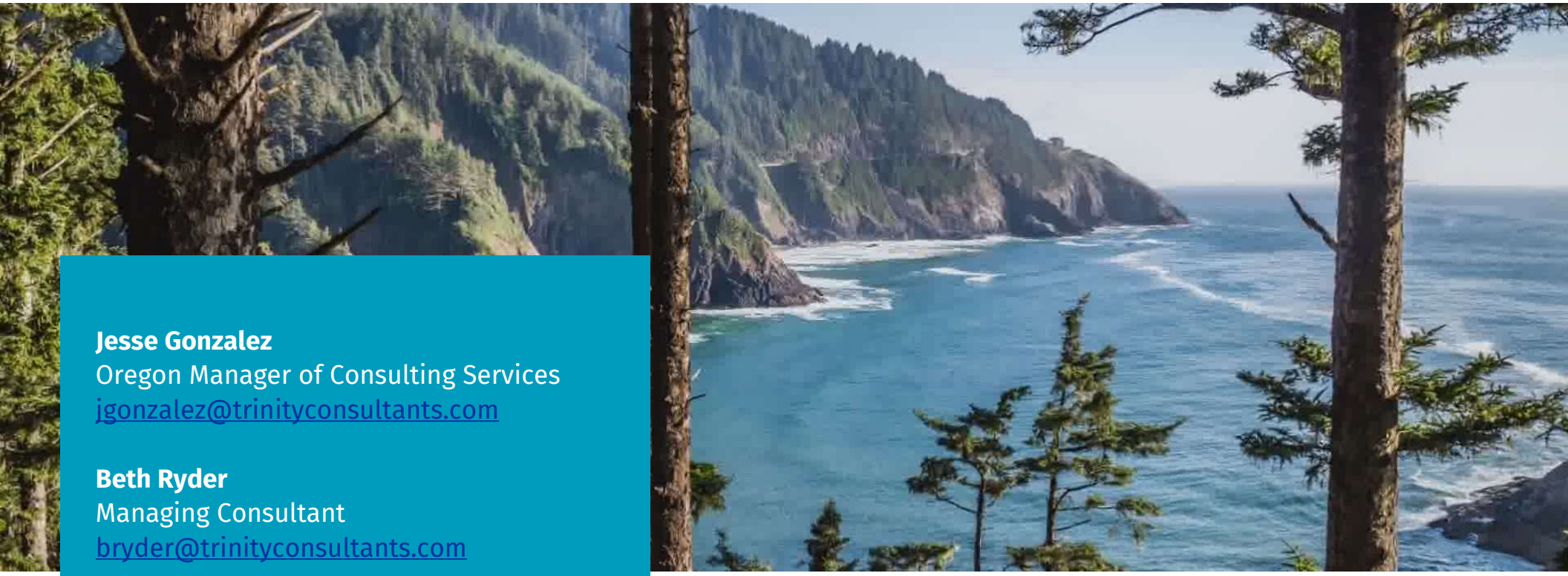

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